



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,808	01/25/2006	Walter Apfelbacher	32860-000986/US	9694
30596 7590 03/10/2008 HARNESS, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195				
EXAMINER				
MAL TIEN HUNG				
ART UNIT		PAPER NUMBER		
2836				
MAIL DATE		DELIVERY MODE		
03/10/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,808

Applicant(s)

APFELBACHER ET AL.

Examiner

TIEN MAI

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 11/05/2007, 04/04/2006, 01/25/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Application number 10/565808 for "Switching Protective Device Comprising Fuses" filed on 01/25/2006 has been examined.

Information Disclosure Statement

2. The information disclosure statement filed on 04/04/2006 is a duplication of an IDS filed on 01/25/2006; therefore, only one IDS is considered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: element 8 is shown in both figs. 3 and 4 are not described in specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a monitoring device for recording of tripping of the fuse must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. Claim 12 recites the limitation "a monitoring device for recording of tripping of the at least one fuse" in lines 3-4. The specification is objected to because it does not provide antecedent basis for this limitation.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 5-11, 13-15, 17, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Narusevicius et al. (US 2003/0119382 "Narusevicius").

8. **In re claims 1 and 19**, Narusevicius discloses medium voltage motor control center cold-welded electrical connector and method, the apparatus (fig. 2) comprises: an operating switching device (210) to switch a load (220) on and off; a disconnection device (fuse holder as shown in fig. 20A and disconnect switch as shown in fig. 19) to disconnect an input terminal from an output terminal, connectable to the load to be driven; and a protective device (206) to protect the load to be driven against short circuits, wherein the protection device include a fuse (206A-206C) in each phase for disconnection in the event of a short circuit, with the operating switching device, the

disconnection device and the protective device being connected in series and being integrated in a housing (see fig. 3) (abstract).

9. **In re claim 2**, Narusevicius discloses that the protective device includes an electromechanical switching device (214).
10. **In re claims 3 and 20**, Narusevicius discloses that the fuse is removable from the housing ([0013]).
11. **In re claim 5**, Narusevicius discloses the protective device is arranged between the disconnection device and an output terminal to the load to be driven (see fig. 2).
12. **In re claim 6**, when the disconnection device in the open state, disconnects and releases the at least one fuse from at least one contact for removal is inherent to Narusevicius's system because the disconnection device is employed to provide safety reason ([0091]).
13. **In re claim 7**, Narusevicius discloses that a slide mechanism for opening and closing the disconnection device (see fig. 20B).
14. **In re claim 8**, Narusevicius discloses that the fuse is cylindrical form (see fig. 19).
15. **In re claim 9**, Narusevicius discloses that the disconnection device includes the functionality of a fused load disconnecter (see fig. 20A and 20B).
16. **In re claim 10**, Narusevicius discloses that the disconnection device includes two disconnection points (see fig. 19).
17. **In re claim 11**, Narusevicius discloses that the fuse is arranged in a moving part (fuse holder) of the disconnection device (see fig. 20B).

Art Unit: 2836

18. **In re claim 13**, electronic switching points are bridgeable by mechanical device is inherent property in Narusevicius's contactor (210).
19. **In re claim 14**, Narusevicius discloses an overload device (temperature sensor 2714 shown in fig. 27 and [0107]).
20. **In re claim 15**, an overload relay is inherent to Narusevicius's system (see fig. 27).
21. **In re claim 17**, Narusevicius discloses that the fuse is removable from the housing ([0091]).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusevicius in view of Jehlicka et al. (US 6,710,698 "Jehlicka").
24. **In re claims 4 and 18**, Narusevicius discloses the limitations as discussed above. Narusevicius does not teach the fuse is a semiconductor protective fuse. Jehlicka teaches several advantages of a semiconductor fuse, i.e., the semiconductor fuse does not require replacing after being tripped, and is ready for operation again right away (col. 1, lines 45-62). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Narusevicius and employ a semiconductor fuse, as taught by Jehlicka, because the semiconductor fuse does not

have to be replaced after being tripped, and is ready for operation again right away (col. 1, lines 45-62).

25. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narusevicius in view of Price (US 4,317,076 "Price").

26. **In re claim 12**, Narusevicius discloses the limitation as discussed above. Narusevicius does not teach a monitor device for recording of tripping of the fuse. Price discloses a fuse is monitored continuously by voltmeter to indicate a blown fuse condition (col. 2, lines 25-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Narusevicius and employ a monitoring device, as taught by Price, in order to provide indication of blown fuse to personnel.

27. Claim 1-3, 5-11, 13, 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti (US 6,108,206 "Criniti") in view of Combas (US 5,969,587 "Combas").

28. **In re claim 1-3, 5-9, 11, 17, 19 and 20**, Criniti discloses semiconductor thermal protection arrangement; the apparatus (fig. 1 and 2) comprising: an operating switching device (15) to switch a load (11) on and off; and a protective device (21) to protect the load to be driven against short circuit, wherein the protective device including a fuse (22) in each phase for disconnection in the event of a short circuit, with the operating switching device, and the protective device being connected in series and being

integrated in a housing (14) and wherein the protective device is an electromechanical switching device (8). Criniti explicitly discloses the fuse is removable from the housing; when the disconnection device in the open state, disconnects and releases the fuse from contact for removal; and the fuse is in the form of a cylindrical fuse. Combas discloses a fuse holder (fused load disconnecter) (114) having a cylindrical fuse (116), when the fuse holder in the open state, disconnects and release the fuse from contact for removal and wherein the fuse holder includes a slide mechanism (138B) for opening and closing. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ removable mechanism, as taught by Combas, in order to provide easier replacement of the fuse by an operator.

29. **In re claim 10**, Combas discloses that the disconnection device includes two disconnection points.

30. **In re claim 13**, Criniti discloses electronic switching points are bridgeable by mechanical contacts (see on/off switch 18).

31. **In re claim 16**, Criniti and Combas disclose the limitations as discussed above except for at least one of current paths has no operating switching device. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate one of the operating switching devices and its function, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

32. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Jehlicka.

33. **In re claims 4 and 18**, Criniti discloses the limitations as discussed above. Criniti does not teach the fuse is a semiconductor protective fuse. Jehlicka teaches several advantages of a semiconductor fuse, i.e., the semiconductor fuse does not require replacing after being tripped, and is ready for operation again right away (col. 1, lines 45-62). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Criniti and employ a semiconductor fuse, as taught by Jehlicka, because the semiconductor fuse does not have to be replaced after being tripped, and is ready for operation again right away (col. 1, lines 45-62).

34. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Price.

35. **In re claim 12**, Criniti and Combas disclose the limitation as discussed above. Neither Criniti nor Combas teach a monitor device for recording of tripping of the fuse. Price discloses a fuse is monitored continuously by voltmeter to indicate a blown fuse condition (col. 2, lines 25-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ a monitoring device, as taught by Price, in order to provide indication of blown fuse to personnel.

Art Unit: 2836

36. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Chung (US 2002/0093774 "Chung").

37. **In re claims 14 and 15**, Criniti and Combas disclose the limitations as discussed above. Neither Criniti nor Combas disclose an overload device. Chung discloses an overload device (14) having an overload relay for monitoring an overload during an operation of motor (16) to determine whether there is an error in the source current supplies to the motor so that the motor is protected. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ overload device, as taught by Chung, in order to protect the motor from overload.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIEN MAI whose telephone number is (571)270-1277. The examiner can normally be reached on M-Th: 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

/Tien Mai/
Examiner, Art Unit 2836